PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Louis S. Crocker, et al.		
Serial No.:	10/660,936	Case: 21063DACB	Art Unit: 1625
Filed:	September 12, 2003		
For:	POLYMORPHIC, AMORPHOUS AND HYDRATED FORMS OF 5-CHLORO-3-(4-METHANESULFONYLPHENYL)-6'-METHYL-[2,3']BIPYRIDINYL		Examiner: Davis, Z.N.

Assistant Commissioner for Patents
Washington, D.C. 20231

DECLARATION OF LOUIS S. CROCKER
PURSUANT TO 37 C.F.R. 1.131

Sir:

I, Louis S. Crocker, hereby declare the following:

1. I was awarded a Bachelor's degree in 1983 by Middlebury College, Middlebury, Vermont.

2. I was awarded a Ph. D. degree in 1989 by Yale University, New Haven, Connecticut.

3. I am a joint inventor named in the referenced patent application.

4. I have been employed by Merck & Co., Inc. continuously since June, 1992 and currently hold the title of Senior Research Fellow in the Department of Analytical Research.

5. Attached hereto is a reproduction of a notebook entry (Merck Research Laboratories Notebook page 17538-74) made by me that I signed and dated prior to July 11, 1997. This entry describes several analyses that were performed on a sample of L-791,456 free base (the compound of Formula A as referred to in the above-referenced application). The particular analyses performed on the sample are XRPD (X-ray powder diffraction), TG (Thermogravimetric analysis), DSC (Differential scanning calorimetry), and Acid Titration. The result of the XRPD analysis is noted as "Crystalline material" and indicates that the X-ray powder diffraction pattern contained well-resolved peaks characteristic of crystalline material. The pattern of peaks observed in the noted XRPD pattern is characteristic of Form I and differs from patterns obtained from other crystalline phases of L-791,456 free base.

6. I hereby declare that all statements made herein of my own knowledge are true and that all statement made of information and belief are believed to be true and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Respectfully submitted,

3 Feb 2004
Date

Louis S. Crocker

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[redacted]

L-791,456 - Free base - Hartman

XRPD 45kV/40mA
sample: L-791,456 free base, 24045-176, 9701673
file: V074a
Crystalline material.

TG 10°C/min, N_2
sample: 9701673
file: V074b
36°C to 171°C: 0.15 = 0.2% wt. loss
wt. loss accompanies melting

DSC 10°C/min, N_2, open pan
sample: 9701673 (1.390 mg)
file: V074c
endotherm, extrap. onset = 135.7°C, peak = 137.3°C, 72.9 J/g
Sample appeared fused and slightly discolored after stopping run at approx. 150°C. N.B. The extrapolated onset temperature of the melting endotherm is usually associated with the melting point.

[redacted]

~~Base~~ Acid Titration file 2Apr99
0.1N HCl. No clear endpoint observed at the 100 pH's obtained in the vicinity of the expected endpoint. Sample of 22.760 mg (B-25) undissolved in 5ml H_2O, undiss. 5ml H_2O + 2ml MeOH, dissolved in 5ml H_2O + 5ml MeOH, titrated in this solvent.

[redacted]

Countersigned
Richard J. Varsolona

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